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ABSTRACT

This report, volume 1 of 5 that were produced by a study, summarizes the study to address the further refinement of the physician assistant (PA) role and continuing medical education (CME) for PAs by developing standards to ensure PA competence. Methods and results of the study are discussed independently for each objective by providing a summary of each of the other four volumes, each of which focuses on one project component. These components are summarized: role delineation for the PA (volume 2), development of a self-assessment examination for PA (volume 3), assessment of the applicability of the Individual Physician Profile program for PAs (volume 4), and design of a system of accreditation and maintenance of a roster of CME programs for PAs (volume 5). Seven recommendations are made for future projects: investigation of relationships between the role delineation and PA education and evaluation, establishment of periodic reverification process for role delineation, profiling of PA profession, further refinement of self-assessment mechanisms, study of impact of CME on PAs' practices, development of learning packages, and development of system ensuring that CME is regularly available covering all areas of the role delineation. (YLB)

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The Development of Standards to Ensure the Competency of Physician Assistants

Volume I of V:

Summary Report

Final Report
Covers Period of Performance
During
July 1, 1976 - August 14, 1979

Sponsor

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(For other key personnel see Preface.)

NOTE:

This volume summarizes the work done under DHEW Contract No. HRA-231-76-0053, "The Development of Standards to Ensure the Competency of Physician Assistants." For more in-depth discussion of the individual components of this project see Volumes II through V whose contents are listed below:

Volume II: Role Delineation for the Physician Assistant

Volume III: Development of a Self-Assessment Examination for Physician Assistants

Volume IV: Assessment of the Applicability of the Individual Physician Profile Program for Physician Assistants

Volume V: The Design of a System of Accreditation and Maintenance of a Roster of CME Programs for Physician Assistants

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PREFACE

Participants in all parts of the study described in the five volumes of this report are listed below.

The project staff and their areas of responsibility were:

Name	Responsibility
Donald W. Fisher, Ph.D. Executive Director, AAPA/APAP	Project Director
Mary Jane Crain Research Associate	Assessment of the applicability of the University of Wisconsin's Individual Physician Profile (IPP) program for physician assistants Maintenance of a roster of CME programs for physician assistants Design of a system of CME program accreditation
Jane Faulman, Ph.D. Research Associate	Verification of the role delineation for the entry level generalist position Physician assistant position classification Development of a self-assessment tool

The Project Officer for the study, from the Division of Associated Health Professions, was Louis A. Quatrano, Ph.D.

Secretarial and administrative support was provided by:

Veronica Marshall
Karen Hummer
Linda Geary

The project staff consulted a measurement and evaluation specialist, Dr. Richard C. Cox of Pittsburgh, Pennsylvania, to assist

with the IPP and system of continuing medical education (CME) program accreditation portions of this study. Specifically, Dr. Cox designed a checklist for IPP participants and helped with the analysis and presentation of all IPP checklist results. He also assisted the staff in the development of checklists distributed to physician assistants in attendance at selected CME programs throughout the country. The data from these checklists was used in the development of a system of accreditation of physician assistant oriented CME programs.

The development of a self-assessment tool was placed under the direction of a consultant to the project who is a specialist in test development. This consultant was Ayres D'Costa, Ph.D., Associate Professor of Health Professions Education at The Ohio State University in Columbus, Ohio. Under Dr. D'Costa's guidance, a self-assessment examination for physician assistants was developed. Dr. D'Costa planned and conducted all meetings at which the test specifications for the examination were delineated and test items were prepared and revised. He was responsible for all computer output necessary to the project. He designed an individualized, computer-generated test report which includes respondents' scale scores both numerically and graphically.

In addition to the help of consultants, the project staff also benefited from the special expertise and insight of members of the Evaluation, Working, and Advisory Committees. Each of the committees had a specific role to play in the completion of this study.

The Evaluation Committee worked primarily on the assessment of the applicability of IPP for physician assistants, the design of a system of CME accreditation, and the maintenance of a roster of CME programs. Members of this committee reviewed the data collected about the Individual Physician Profile program, suggested other information to be obtained, and made recommendations regarding the program's applicability for physician assistants. The Evaluation Committee had a major role in the development of instruments, the review of data, and the making of recommendations regarding continuing medical education options and accreditation systems. Also, this committee reviewed the roster format for CME programs.

Members of the Evaluation Committee included educational specialists competent in criterion-referenced measurement, design of instructional materials, evaluation methodology, and clinical simulation. The Academy's Professional and Continuing Education Committee had two representatives serving on the Evaluation Committee. The ten members of the Evaluation Committee were:

Philip G. Bashook, Ed.D.
Chicago, Illinois

Robert J. Blakely
Chicago, Illinois

Sarah M. Dinham, Ph.D.
Tucson, Arizona

Stephen C. Gladhart, Ph.D.
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Washington, D.C.

Paul S. Toth, P.A.-C.
Durham, North Carolina

The seven-member Working Committee worked closely with the project staff in developing the Role Delineation for the Physician Assistant. This document was produced via the accomplishment of two tasks: verification of an earlier role delineation (included in the Curriculum Resource Document project) and determination of a position classification for the physician assistant profession. Members of this committee included practicing physician assistants, physicians (in private practice and hospital settings) who employ physician assistants, faculty of physician assistant training programs, and one representative from the Curriculum Resource Document project. The members of the Working Committee were:

Mack Bonner, Jr., M.D.
New York, New York

Trudy Jo Companiotte, P.A.-C.
Nashville, Tennessee

William E. g. de Alva, M.D.
Denver, Colorado

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Allan B. Kunkel, M.D.
Cleveland, Ohio

Daniel O. Myhre, P.A.-C.
Spokane, Washington

Representatives from major medical organizations with a significant interest in the physician assistant profession served on an Advisory Committee to review materials and provide input to the staff and the other

two committees for all phases of the study. Representatives from the two other committees for the contract served as liaison members on the Advisory Committee. The members of this committee reviewed and provided advice on data, interim reports, and conclusions and recommendations about the role delineation for the physician assistant, the Individual Physician Profile program, the system of CME program accreditation, and the roster of CME programs for physician assistants. The members of this Advisory Committee were:

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Daniel R. Thomas*
Chicago, Illinois
American Hospital Association

Harold Zintel, M.D., F.A.C.S.
Chicago, Illinois
American College of Surgeons

Three groups of physician assistant practitioners and educators contributed to the development of the Self-Assessment Examination for Physician Assistants. The Test Specifications Committee provided input for the test specifications matrix, for item revision, and for future research. The six members of this Committee were:

Carl E. Fasser, P.A.-C.
Houston, Texas

David L. Glazer, M.A.
Atlanta, Georgia

Allan B. Kunkel, M.D.
Cleveland, Ohio

Laurie Lipsig, P.A.-C.
Chicago, Illinois

Thomas E. Piemme, M.D.
Washington, D.C.

Judith B. Willis, M.A., P.A.-C.
Kalamazoo, Michigan

*In May 1979, Thomas Atchison, Ed.D., replaced Daniel Thomas at the American Hospital Association.

A committee of 24 physician assistants met in two workshops to develop and revise test items. The large majority of the items on the exam were produced by this group. The Workshop Item Writers were:

Donald A. Abrams, P.A.
Jamaica Plain, Massachusetts

Randall C. Bennett, P.A.-C.
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Scott Chavez, P.A.-C.
Las Vegas, Nevada

Robert Christie, P.A.-C.
Dayton, Ohio

Linda Davies, P.A.-C.
Arlington, Virginia

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Springfield, Missouri

Max Dawkins, P.A.-C.
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Edward Friedmann, P.A.-C.
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Richmond, Virginia

Thirty PAs were asked to be Field Item Writers. Materials on writing test items were mailed to them, and they were requested to write items and forward them to the national office. The PAs asked to be Field Item Writers were:

Timothy Bauer, P.A.-C.
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I wish to thank the project staff, consultants, and committee members (listed in the Preface) who gave so much of their time and experience. We owe a large debt of gratitude to Louis Quatrano, Ph.D., Margaret Wilson, Ph.D., and Robert Conant, Ph.D., for their contributions, advice, and leadership throughout the project.

Especial thanks, however, goes to those persons who worked as staff on contract activities for a limited period of time, particularly Judy A. Light for her creativity in research design, guidance, perseverance, and dedication to the project and the physician assistant profession during her tenure as project director (1976-1978). Also, professional staff support was provided by Ted Kastelic, Ph.D., and secretarial and administrative staff who worked efficiently and effectively on a variety of contract activities were Laura Friedman and Susan Herre.

The staff for the contract would also like to thank others working in the National Office who took time out of busy schedules to review reports, coordinate activities, and offer suggestions. Such cooperation is appreciated.

A very special thanks goes to members of the physician assistant profession. The willingness of physician assistants to spend long hours completing forms, taking tests, and serving on committees is testimony to the enthusiasm and commitment of these individuals to their profession and its objectives.

Donald W. Fisher, Ph.D.

ABBREVIATIONS

AAPA	American Academy of Physician Assistants
AMA	American Medical Association
CME	Continuing medical education
CRD	Curriculum Resource Document
IPP	Individual Physician Profile
PA	Physician assistant

I. INTRODUCTION AND OBJECTIVES

With increasing public demand for health care and a trend toward medical specialization, a shortage of primary care physicians developed in the United States in the late 1960's. To help alleviate this shortage, the concept of a physician assistant (PA) was proposed and accepted. The American Medical Association's (AMA's) definition of a physician assistant has been widely adopted. The AMA identified the physician assistant as:

> a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of the licensed physician who is responsible for the performance of that assistant.[1]

Since 1965 when the first training program began at Duke University, the number of practicing physician assistants has grown to approximately 10,000 and is increasing at the rate of about 1400 yearly. The American Academy of Physician Assistants (AAPA) is the official membership organization for the profession. One of the most important priorities of this organization is to ensure that physician assistants are continually providing the best and most effective health care possible.

As a basis for ensuring the provision of quality health care, it is necessary, however, to identify specifically which skills and knowledge are required of PAs. In 1975, with Department of Health, Education, and Welfare funding, the AAPA developed an initial role delineation for the physician assistant and suggested means of utilizing this role delineation

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[1] Todd, M.C. & Foy, D.F. Current status of the physician's assistant and related issues. Journal of the American Medical Association, 1972, 220, 1714-1720.

in PA education. A panel of experts who were training PAs or practicing as physician assistants worked with AAPA staff to identify major and specific responsibilities for physician assistants. This role delineation was Volume I of the Curriculum Resource Document[1] (CRD), published in 1976. How to apply the role delineation in PA education was Volume II of this 1976 report.

This 1976 project did not in and of itself ensure the competence of physician assistants. In fact, there were several components of competence assurance that were not covered in this project. One was a verification from physician assistants that they were performing the tasks in the 1976 role delineation in practice, and that this role delineation identified a realistic minimum level of competence. A second question or component that needed to be addressed was whether there might exist multiple positions reflecting either an advanced level or specialty practices of physician assistants with accompanying differences in areas of required competence.

Early graduates of physician assistant training programs were also quick to realize the need to ensure their competence by continued learning. Indeed, one of the early purposes of the AAPA was to promote self-improvement through continuing medical education (CME). Thus, a third component of competence assurance is the investigation of means to help PAs identify their professional strengths and weaknesses and strengthen, maintain, and update their medical knowledge and skills.

These components of competence assurance have been and will continue to be closely intertwined. Delineating a role, while not limiting what a

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[1] American Academy of Physician Assistants. Curriculum resource document. (NTIS No. PB 263912/LLC for Volume I, No. PB 264716/LLC for Volume II) Springfield, VA: U.S. Department of Commerce, National Technical Information Service, 1976.

PA does or should learn, helps to identify skills and knowledge pertinent to most physician assistants in practice. This role delineation can serve as a foundation upon which to build educational experiences geared to ensuring the patient that a practitioner is up-to-date and competent.

In 1976 the AAPA proposed to address the further refinement of the physician assistant role and continuing medical education for PAs. Specific objectives of this study to develop standards to ensure physician assistant competence were to:

(1) verify the competenices requisite for the entry level generalist position as identified in the Curriculum Resource Document, Volume I (HRA 231-75-0209);

(2) identify physician assistant practitioner positions which are other than that of entry level generalist and, if necessary, establish a position classification system and role delineation for each position identified;

(3) develop a criterion-referenced self-assessment tool and pilot test it on a sample of graduate physician assistants;

(4) process 100 PAs through the University of Wisconsin-Extension's Individual Physician Profile (IPP) program and assess this program's applicability for physician assistants;

(5) design a system of accreditation of continuing education programs for physician assistants; and

(6) develop a roster of accredited continuing education programs for physician assistants.

Note should be made that verification of the competencies of the entry level generalist position and the development of a position classification (Objectives 1 and 2) are discussed in the Role Delineation for the Physician Assistant (Volume II of this series). The development of a roster of CME programs (Objective 6) is discussed in conjunction with the system of CME program accreditation (Objective 5) in Volume V.

II. SUMMARY OF METHODS AND RESULTS

Due to the nature and conduct of this study, methods and results are best discussed independently for each objective. The four sections which follow summarize study activities.

A. Role Delineation for the Physician Assistant (Summary of Volume II of V)

The role delineation contains those tasks which all physician assistants should be competent to perform. This role delineation is the result of two specific study objectives, i.e., to (a) verify an initial role delineation, which was for the "entry level generalist" position, and (b) establish a position classification for the PA profession. The Working Committee worked closely with the project staff in developing the role delineation. Their first task was to verify the initial role delineation for the entry level generalist position. Then, using the verified role delineation and data collected from practicing PAs, the possibility of multiple PA positions was investigated.

The methods used to develop the role delineation included developing task checklists, selecting and contacting samples of physician assistants to complete the checklists, analyzing the checklist data, and reaching decisions. Chronologically, the following activities were conducted. The first task checklist was constructed for completion by a sample of recent graduates; their responses served as an aid in decisions to include or exclude checklist tasks in the verified role delineation for the entry level generalist position. This checklist was later revised to include tasks which PAs in "advanced" or "specialist" positions might perform. The revised checklist was

completed by the same sample who completed the first checklist and by a new sample who had been in practice for several years. The responses of both groups were referred to in deciding on the number of positions comprising the physician assistant profession and on the specific tasks which should appear in the subsequent role delineation. Decisions were based on the alternating steps of relying on data to describe "what is" and on expert opinion to describe "what should be." Each step of the method was designed to make the two descriptions compatible. Relying on both the task checklist data and their own expert opinion, the Working Committee concluded that, at this time, there is one PA position, the primary care position. The role delineation for the physician assistant is for this one position.

The role delineation contains three comprehensive roles or areas of competence. Briefly, these are:

> Professional Role -- the competence necessary to assuming, maintaining, and developing a role identity as a physician assistant
>
> Interpersonal Role -- the competence necessary to effectively communicate with other people
>
> Clinical Role -- the competence necessary to apply medical knowledge and skills to patient problems

Within the role delineation, major and specific responsibilities describe in progressive detail the particular tasks a practitioner should be able to perform competently. The 11 major responsibilities describe broad areas of performance, each conveying one major activity of the role. Together, the major responsibilities map into the three general areas of competence. The specific responsibilities describe the execution of the major responsibilities. Within a major responsibility, the specific responsibilities may consist of single performance statements or they may form a hierarchy of performances, depending upon the number of levels

necessary to describe in sufficient detail the fulfillment of the major responsibility.

It is neither practical nor useful to include in a role delineation all possible activities that a practitioner might perform. Rather, the role delineation contains those competencies that are absolutely essential for entering and practicing in the PA profession.

The role delineation has specific, appropriate uses. Its ultimate user is the physician assistant, defined as someone who has graduated from an accredited PA training program and/or has been certified by the National Commission on Certification of Physician's Assistants. Inherent in the PA role is supervision by a licensed physician. Although supervision is not explicitly stated, it is assumed present for each task included in the role delineation, although the format of the supervision may vary across tasks and across practices.

The role delineation is relevant to the PA through education and evaluation. PA education is ongoing and is experienced first through a formal training program and thereafter through CME programs. Examples of how to use a role delineation to develop physician assistant program curricula are presented in the Curriculum Resource Document, and some recommendations for using the role delineation in the development of CME experiences are given in Volume V of this report. PAs may be evaluated with both self-assessment instruments and proficiency examinations. In another part of this study, a preliminary self-assessment examination, based on the role delineation, has been developed (see Volume III).

In addition to the above indirect uses, practicing PAs will find the role delineation directly useful in their own informal comparisons between the role delineation and their practices. Potential entrants to the PA profession can use the role delineation to acquaint them with the

competencies they would be expected to develop. The role delineation can provide some preliminary answers to questions such as, "Would I like this profession?" "Do I have an appropriate background to enter this field?"

Certain caveats are in order for the users of the role delineation. The role delineation should be looked upon as a "lower bound" for PA competencies. It is merely a report of those tasks which a PA should be able to perform competently in order to enter and practice in the profession. THE ABSENCE OF ANY TASK FROM THE ROLE DELINEATION SHOULD NEVER BE USED TO PREVENT A PA FROM COMPETENTLY PERFORMING THE TASK UNDER APPROPRIATE PHYSICIAN SUPERVISION.

Nor should the role delineation be viewed as a static document. As the PA profession grows and changes, the role delineation must change. Moreover, future research may demonstrate that one role delineation is no longer sufficient for the profession. Changes in the PA profession may come from several sources, e.g., legislation, technology, or medical knowledge. THEREFORE, THE ROLE DELINEATION MUST BE REVIEWED AND UPDATED PERIODICALLY IF IT IS TO CONTINUE TO BE A USEFUL DOCUMENT TO THE PROFESSION.

B. Development of a Self-Assessment Examination for Physician Assistants
(Summary of Volume III of V)

In addition to traditional CME experiences, continuing education can be provided by self-assessment tools. A preliminary competency-based, self-assessment examination was developed to provide to PAs a tool that would be easy to access, convenient to use, self-paced, and nonthreatening. The examination was based on the role delineation for the physician assistant (see Volume II).

The exam incorporates a 3-pronged approach to determining a PA's need for continuing education. First, a PA's practice profile might

reveal that there are diseases or patients seen for which the PA is not sufficiently competent. Second, a PA might personally feel the need to learn more about certain topics. Third, a diagnostic measurement tool might identify areas of weakness. The PA self-assessment exam provides measures from all three approaches, allowing for a comprehensive report of a PA's practice profile, perceived CME needs, and test scores.

The exam was developed under the direction of a specialist in test development who served as a consultant to the project. The Test Specifications Committee (comprising PA practitioners and educators) developed the test specifications matrix, provided guidance for test revision, and suggested directions for further development. Two groups of PAs developed test items. The Workshop Item Writers met twice to receive training in item writing and to then write and revise items. The Field Item Writers were mailed training materials on item writing and were asked to develop items individually. A third source of test items were those PA training programs who were willing to share some of their test items for potential inclusion in the self-assessment exam.

The test specifications matrix was based on the 11 major responsibilities of the role delineation for the physician assistant and on five skill levels. Additional criteria were identified in order to represent PA practice. These criteria include the 15 most commonly presented patient problems identified by the Medical College of Virginia study, 13 body systems categories, four medical intervention types, patient type (sex and age), and 12 medical specialty areas. It was decided to de-emphasize the medical specialty criterion. However, it is possible to display the distribution of test items and demonstrate their representativeness of PA practice using any combination of these criteria.

A novel approach was utilized to ensure that the test items would be practice-based and relevant. This approach involved the use of the critical incident technique to identify test scenarios or patient situations.

The current exam is the result of two tryouts. The first tryout occurred during the Seventh Annual Conference on Physician Assistants. At that time, the test consisted of four 80-item sections. PAs were invited to complete a section while at the conference. A fifth 80-item section was later developed (primarily from PA program test items) and completed by senior PA students at five PA programs.

The item analyses of the five sections were provided to the Workshop Item Writers for their second meeting, during which they revised and rewrote items for the second tryout. The second tryout version was completed by a national sample of PAs to represent the most likely users of the self-assessment exam, i.e., certified PAs. They marked their answers on standard, machine-scoreable answer sheets.

The second tryout version contained 315 exam questions. Additional questions were included to describe the test takers' practice profiles and CME needs. During the development of the exam, it was decided that test feedback in terms of body systems and type of medical intervention would be especially useful to PAs, as these are terms with which they are already familiar. Therefore, 28 body system - intervention scales were labeled a priori, based on the items available. For each of the 28 scales, the test contained a question concerning the number of patients the PAs saw in a typical month and a question concerning their degree of comfort in their performance with patients with problems in that scale category. Examples of these scales are "Emergency Cardiovascular," "Acute Musculoskeletal," and "Chronic Respiratory."

Exam feedback to PAs is in the form of a 4-page computer-generated report. Both general (i.e., the same for everyone) and individual information is provided. The general information includes: the correct response for each item, the mean and standard deviation for the national sample, and, for both the total exam and each scale, the total number of items and the minimum competency score. The following individual information is reported: the PA's response to each item, total and scale scores, and a graphic presentation of the PA's practice profile, CME needs, and score on each of the 28 body system - intervention scales. In addition to those 28 scales, 17 scales, which were derived from the role delineation, are reported. At this point in the development of test items, not enough items are available to form a scale for each of the 11 role areas. Therefore, some of the "role delineation" scales represent a more general area of competence derived by a meaningful combination of role areas. For the role areas that are already well represented on the the self-assessment exam, it was possible to derive more than one scale so as to represent competence within various body systems. At this stage, there is a limited number of role area - by - body system scales available.

The second tryout suggested that some items should be discarded and others should be revised for any future use. Based on item analysis and on review by the Test Specifications Committee, seven items were deleted from scoring. Many of the other items have been revised from the second tryout version. Some revisions are minor (e.g., grammatical changes or rewording), while others are more extensive. The current version of the exam reflects these deletions and revisions.

C. Assessment of the Applicability of the Individual Physician Profile Program for Physician Assistants
(Summary of Volume IV of V)

The American Academy of Physician Assistants recognizes that continuing medical education programs not explicitly developed for physician assistants may nonetheless be useful for them. This recognition, together with a continuing interest in and search for innovative and effective CME formats, resulted in this project to investigate the applicability for physician assistants of the Individual Physician Profile program developed by the University of Wisconsin - Extension's Department of Continuing Medical Education.

This IPP program was designed to help general and family practitioners analyze their practices and identify the areas in which they most need continuing medical education. The three major components of this program are:

(1) the development of a practice profile for each participant;

(2) the generation of a test appropriate to this practice profile; and

(3) the formulation of recommendations for continuing medical education based on the test results and the practice profile.

The University of Wisconsin's staff had responsibility for processing PAs through the steps of the IPP program. To develop a practice profile, each physician assistant participant completed an information sheet that requested personal, demographic, educational, and practice data, as well as information on the availability to him/her of continuing medical education resources. Participants also tape recorded or used a paper and pencil logging system to record information on patient problems seen during a five-day work week.

Based on the practice profile data each participant submitted, a test of no more than 125 questions was generated at the University of Wisconsin to assess t e participant's knowledge of problems occurring among patients he/she saw in practice. Upon completion of the test, each participant returned an answer sheet to Wisconsin for scoring.

As a final step in IPP, participants were provided booklets which summarized data about their practice settings and test results. A telephone consultation was conducted with each participant to discuss the practice profile, test results, and CME needs and preferences. A letter was then sent from Wisconsin suggesting topics for each participant's continuing medical education and providing a listing of some specific programs offered/resources available on those topics. (Specific programs, audiovisual aids, medical texts, etc. were selected from the University of Wisconsin - Extension's Educational Resource Index.)

For this project, a trial group of 100 physician assistants was to be processed through IPP. A stratified, random sample of 1975 graduates of American Medical Association approved physician assistant programs, and/or physician assistants who had passed the National Commission on Certification of Physician's Assistants fall 1975 examination was selected by AAPA project staff for the IPP program. To be eligible for the program, a physician assistant had to have "logged" fewer than 50 hours of CME credit with the AAPA in preparation for his/her 1978 reregistration.

With replacement sampling, special invitations to some physician assistants to participate, etc., a total of 199 physician assistants were contacted about participating in IPP. Eighty-nine physician assistants completed the program.

To help assess the program's applicability for PAs, attitudinal data was collected by AAPA staff, in consultation with a measurement and evaluation specialist, from physician assistants who had been contacted about and/or who participated in IPP. Data was collected, via checklist, regarding participants' reactions to the program, and the reasons physician assistants had for beginning but not completing IPP, for declining to participate, or for not responding to the invitation to take part in the program.

The checklist responses of most physician assistants who completed IPP were positive and indicated a receptivity to the program. These physician assistants were able to complete IPP as designed, and about three-fourths thought the suggestions for CME would be helpful. When it came to actual use of IPP's CME recommendations, however, many physician assistants were unable or unwilling to modify their CME-related behavior to accommodate the recommendations from the program.

It became apparent from questioning those physician assistants who began but did not complete IPP, and those PAs who did not respond to or did not accept the IPP invitation, that the administrative design of the program might cause some problems. By far the most frequently cited reason for not completing IPP was that the participants did not have time to finish the program. Physician assistants who declined to participate in IPP most often indicated that this was due to the time-consuming nature of the program. Those PAs who did not respond to the IPP invitation, but later returned a checklist and indicated their reasons for nonresponse, also cited program-related factors such as the time required, fear of breach of patient confidentiality, and the fact that the program did not appear worthwhile.

As a measure of the extent to which the IPP program helped physician assistants discover and meet their CME needs, AAPA project staff monitored participants' CME activities for six months prior to their enrollment in, from their enrollment in to completion of, and for several months after they had finished IPP. This enabled a comparison of IPP recommendations with the actual CME-related behavior of participants. The results of this comparison were, however, inconclusive. Only 14 IPP participants had actually logged CME during the monitoring period. It was also obvious that unless clear deviations occurred in previous CME behavior patterns of participants after IPP, and/or unless participants engaged in CME programs, used texts, etc. which were specifically suggested by the IPP staff at the University of Wisconsin, it would be difficult to determine the actual impact the program had on participants' CME activities.

Information regarding IPP was also obtained by having Evaluation and Advisory Committee members review and comment on the currentness and appropriateness for physician assistants of listings of audiovisual materials, programmed instruction units, home study courses, and medical texts appearing in three frequently cited sections from the Educational Resource Index. The committee members generally felt that some of the entries in the sections of the Educational Resource Index which were reviewed were outdated and that more current information should be included. More care should also be taken to ensure that entries in this index are primary care oriented.

At the suggestion of the Evaluation Committee, the University of Wisconsin's IPP staff responded to questions regarding existing evaluations of, costs of modifying, and commitment to the program. Several PAs who were favorable to IPP when first queried were also asked by AAPA

staff, via telephone or letter, if they would personally pay the $80 registration fee and enroll in IPP on their own initiative.

Taking the data that had been collected from physician assistants, comments about the Educational Resource Index, and information from the University of Wisconsin's IPP staff, the Evaluation Committee made recommendations regarding the applicability of the Individual Physician Profile program for physician assistants. The Evaluation Committee approved the basic concepts involved in IPP and felt that further research into the approach was warranted. It was, however, the opinion of the Evaluation Committee that, while physician assistants could successfully be processed through the program, the Individual Physician Profile has serious drawbacks which limit its usefulness for physicians and physician assistants alike. The Evaluation Committee therefore concluded that IPP, as it is currently designed and implemented, is not applicable for physician assistants. The Advisory Committee concurred with these recommendations.

D. Design of a System of Accreditation and Maintenance of a Roster of CME Programs for Physician Assistants
(Summary of Volume V of V)

Provision of effective continuing medical education is another means of helping to ensure physician assistant competency. To promote the provision of quality CME for PAs, the AAPA developed Guidelines for Recognition and Accreditation of CME Programs and devised a system for applying these Guidelines.

The members of the AAPA's Professional and Continuing Education Committee have constantly scrutinized and revised these accreditation Guidelines. As an accreditor of CME for PAs, the Academy has also amassed much information on what programs are being offered where. To

further improve the provision of CME for physician assistants, the AAPA proposed to:

(1) suggest modifications in design and/or emphasis for its existing accreditation system for group-oriented CME programs;

(2) maintain a roster of such CME programs; and

(3) search for alternative means for physician assistants to maintain and update their skills and knowledge.

The focus of the roster developed as part of this project was on group-oriented CME programs of the "lecture-learner" type which were applying for AAPA approval. The project staff first consulted members of the AAPA's Professional and Continuing Education Committee to determine which CME program records were maintained and in what form. Taking this information as a basis, the staff, with the aid of the Evaluation and Advisory Committees, proposed a design for a roster system.

The CME program information was filed chronologically. Each entry was then assigned an identification number which consisted of the date (month and year) of the program, the state (coded numerically) in which the program was held, and the topic (also coded numerically using a modified version of the International Classification of Diseases, Adapted system). For the two-year period from July 1976 to June 1978, 411 CME programs were identified and included in the roster. Based on the roster entries, an increase in the number of CME programs seeking AAPA accreditation is detectable.

The Evaluation and Advisory Committees did suggest that, if a roster system were implemented by the AAPA, expansion and revision of the topic codes might be in order. Also, the roster should in some way reference programs accredited by other organizations recognized by the AAPA.

To provide information on CME programs for PAs in addition to that contained in the roster, data was collected, via checklist instruments, from physician assistants at 23 CME programs throughout the country. PAs were asked to give their reasons for attending programs, their opinions of the effectiveness of various teaching methods, their opinions on the design and execution of CME programs, etc.

Because of the unique professional relationship between physician assistants and physicians, supervising physicians of approximately half of the PA checklist respondents were also queried regarding CME for PAs. These physicians were asked such questions as what factors would prompt them to recommend a CME program to the PAs they supervise, what factors would be most critical in determining whether they would favor implementation in practice of what a PA learned at a CME program, and what their general impressions were of the utility of PAs' participating in CME.

A consultant skilled in measurement and evaluation helped the project staff and the Evaluation Committee to design both the physician assistant and physician checklists. This consultant also assisted in the analysis and presentation of the checklist data.

Using information from the roster and the CME checklists, and personal expertise, the Evaluation and Advisory Committees suggested alterations in the AAPA's current system of CME accreditation. The Evaluation Committee proposed a Coordinating Committee on CME Accreditation which would utilize educational experts, practicing physician assistants, physicians, and program organizers in the accrediting process. This Committee's responsibilities would include:

(1) recognition of the CME accreditation mechanisms of other medical organizations;

(2) individual CME program accreditation; and

(3) accreditation of sponsors of multiple CME programs yearly.

The Evaluation and Advisory Committees also made recommendations regarding the materials that applicants for both sponsor and program accreditation should submit. These rather lengthy lists of materials did deviate in some instances from current AAPA accreditation standards.

Alternative formats for CME were discussed by both the Evaluation and Advisory Committees. Performance-based testing and self-assessment approaches were areas in which additional commitment of resources was proposed. Teaching methods such as mini-rotations geared to reinforcement of clinical competencies could be used to further direct CME toward performance objectives.

In addition to the format of learning experiences, care should also be taken to assure that CME is offered in all areas of the PA role. The Role Delineation for the Physician Assistant (Volume II) identifies minimum competencies of PAs and could be used by planners in selecting topics, as well as by accreditors of programs, to determine (1) if a particular program is relevant to PAs and (2) if programs need to be offered more frequently on certain topics.

III. SUMMARY AND RECOMMENDATIONS

The assurance of professional competence is multifaceted. It is also ongoing, beginning with PA training and continuing throughout each physician assistant's career. Wilson[1] has developed a model of competence assurance which would result in congruence between a practitioner's education, practice, and credentialing. Her model, presented in Figure 1, provides a useful backdrop against which to discuss the findings of this study.

Wilson's model contains five components which have specific, directional relationships. These components are:

(1) role delineation,

(2) practitioner assessment,

(3) subsequent competency education,

(4) initial competency education, and

(5) practitioner evaluation.

The first three components listed above were addressed in this study.

The first component, role delineation, serves as a standard of competence against which to measure a practitioner's performance and is the basis for the other components. The role delineation for the physician assistant (reported in Volume II) is for all physician assistants. It describes the primary care position.

To address the second component of the model, practitioner assessment, a self-assessment examination for physician assistants was developed (see Volume III). This examination, based on the role

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[1]Wilson, M.A. A competency assurance program. The American Journal of Occupational Therapy, 1977, 31, 573-579.

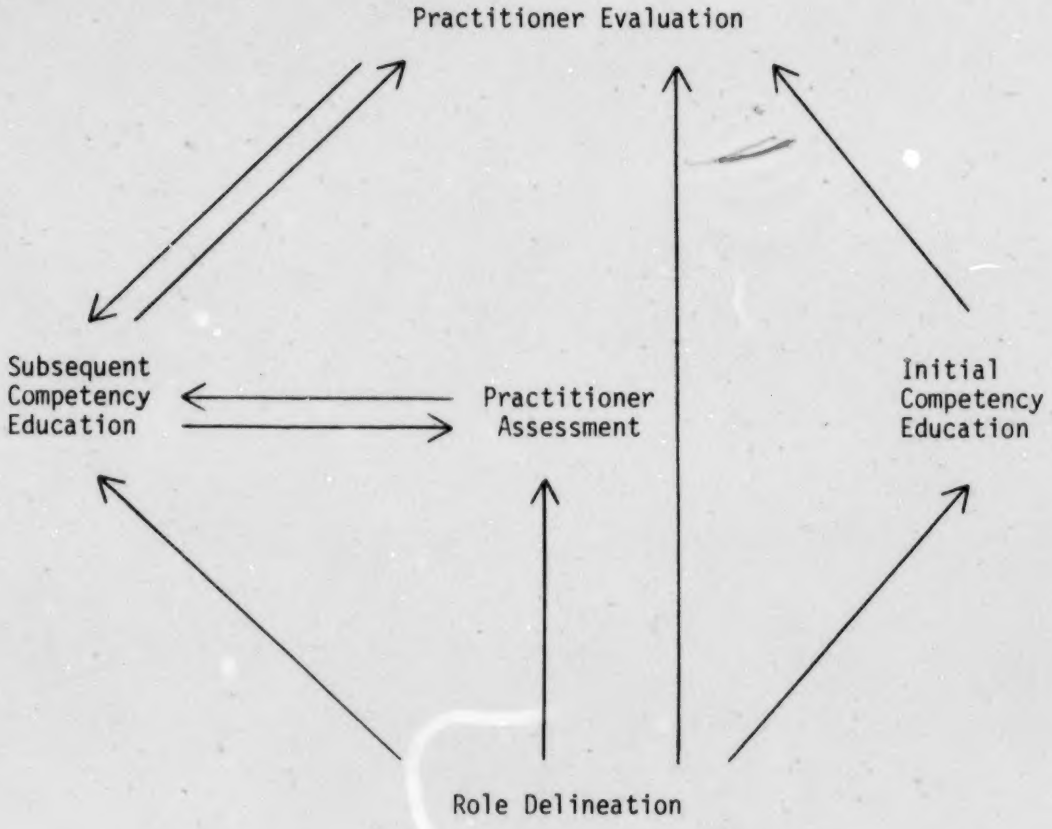

Figure 1. Components of a Competence Assurance Program[1]

[1]Ibid., p. 579.

delineation, is still in the preliminary stage; while some of the 11 major PA role areas are well represented, other areas need extensive item development.

The third and last component of the Wilson model which was addressed by this study was "subsequent competency education" or continuing medical education (Volumes IV and V). This study focused primarily on CME programs already in existence for physician assistants and on alternative designs and emphases for accreditation of "lecture-learner" programs.

The two remaining model components, initial competency education and practitioner evaluation, were not specifically addressed in this study. For initial competency education programs, the role delineation is, however, a standard in two ways. First, the training programs should use the role delineation for defining the competencies they want their students to learn. Second, they should evaluate their students on the role delineation model. The role delineation should not be seen as restrictive, but as a guide to ensuring that graduates can competently perform at least those tasks included in the role delineation. Thus, the role delineation "is both the foundation and the goal of initial competency education" (Ibid., p. 576). Practitioner evaluation, the final component of the competency assurance model, is accomplished via the national certifying examination administered by the National Commission on Certification of Physician's Assistants.

This study contributed a great deal to ensuring the competence of physician assistants. With the completion of the parts of this study dealing with verification of the role delineation and development of a self-assessment examination, all five components of the Wilson model

exist relative to the PA profession. This study also revealed that much remains to be done if truly effective competence assurance programs are to be implemented.

First, all components of competency assurance should be well integrated. The self-assessment examination, developed as part of this study, is based on the role delineation and exemplifies the integration of two components of competency assurance. In the future, in order to provide an effective program of competence assurance for PAs, efforts must be directed toward relating curricula, CME, and the certification process to each other and to the role delineation.

Second, the role delineation, which serves as a performance standard upon which the other competency assurance components depend, should be regarded as a dynamic rather than a static document. Factors such as advances in medical knowledge, public opinion, patient acceptance, legislation, regulations, and interactions with other health care provider groups may influence the role of the PA. The role delineation must therefore be monitored and updated periodically in order to incorporate any necessary changes resulting from these sources. In turn, such changes in the role delineation will have direct implications for training, CME, self-assessment, and certification programs.

As a complement to the role delineation, a third recommended project would be to develop a national profile of the PA profession. A valid profile would: consist of test-measured strengths and weaknesses of PA practitioners; recognize the perceived needs of practitioners; and incorporate information on the actual demands of the PAs' practices. This profile can serve to answer questions about the relevance and adequacy of the training PAs receive and the current educational needs of PAs,

based on their actual practice demands and personal role expectations. The profiling process may be streamlined so that it can be incorporated, as far as possible, into currently available mechanisms of the profession, such as the AAPA's procedures for accounting for and providing CME, utilizing need-based demand for CME by individual practitioners.

Fourth, relating to practitioner assessment, it is necessary to continue to develop and refine self-assessment mechanisms for physician assistants. For the immediate future, the self-assessment examination developed as part of this study needs further modifications and additions. Also, other programs in addition to the University of Wisconsin - Extension's Individual Physician Profile should be investigated and modified, or a new program created, to function effectively for PAs.

Fifth, with regard to continuing education, this study attempted to determine, via checklist, whether physician assistants were using in practice what they learned at CME "lecture-learner" programs. This type of project could and should be expanded to do a controlled study of the effect of various teaching methods on the use of what is learned through CME. In addition to having practitioners report, via checklist, what information from a CME program they use in practice, it would also be beneficial to validate practitioner response by direct investigation in the practice setting of the impact of CME.

A sixth appropriate step relating to continuing education for PAs, is the development of prescriptive learning packages. Some materials are already available to PAs to supplement the more traditional CME offerings. Materials should be made available that assist PAs in carrying out all responsibilities of the role delineation. As the development of learning packages becomes more sophisticated, they can be individualized

so that the learning methods as well as the topics offered complement practitioner needs.

Finally, with the coordinated maintenance of self-assessment tools and learning packages, it is envisaged that a national CME system should be developed by the AAPA which would utilize as many as possible of the existing and developable resources available in PA programs and other medical centers. Such a system might function as follows:

(a) PA requests self-assessment-CME information from AAPA.

(b) AAPA sends brief practice/professional needs survey, which PA completes and returns.

(c) AAPA accesses test-item bank and prints out a test form tailored to the needs of the PA. In time, these forms could be made available to several similarly-situated PA practitioners instead of being individually generated. The development of "practice frames" (analogous to a "sampling frame") will help to standardize the test form that would be suitable for the particular type of PA.

(d) PA completes the self-assessment exam and receives feedback and learning prescriptions. Accompanying this feedback report would be a list of learning programs -- training courses, sessions, workshops -- from which the PA could select, based upon identified needs. Included in the list would be packages available via the AAPA.

(e) PA chooses learning programs and participates in those selected. PA again assesses own competence in the areas just studied. PA participation data is sent to the AAPA for recording of CME credits.

In summary, some of the projects to be undertaken as a result of this study are the following:

- investigation of the relationships between the role delineation and PA education and evaluation,
- establishment of a periodic reverification process for the role delineation,
- profiling of the PA profession,

- further refinement of self-assessment mechanisms,
- study of the impact of CME on PAs' practices,
- development of learning packages, and
- development of a system which ensures that CME is regularly available covering all areas of the role delineation.